ABSTRACT

The described systems and methods described are directed at encoding randomly distributed features in an object. Randomly distributed features in an authentication object are determined. Data representing the randomly distributed features is compressed and encoded with a signature. A label is created and includes the authentication object and the encoded data. The data may be compressed by determining a probability density function associated with the authentication object. Vectors associated with the randomly distributed attributes are determined based, at least in part, on the probability density function. The vectors are encoded using an arithmetic coding algorithm.